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Docket No.: M4065.0700/P700-A  
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Letters Patent of:  
Terry L. Gilton et al.

Patent No.: 6,812,087

Issued: November 2, 2004

For: METHODS OF FORMING NON-  
VOLATIVE RESISTANCE VARIABLE  
DEVICES AND METHODS OF FORMING  
SILVER SELENIDE COMPRISING  
STRUCTURES

Certificate  
MAY 13 2005  
of Correction

**REQUEST TO CORRECT A CERTIFICATE OF CORRECTION PURSUANT  
TO 37 CFR 1.322 AND REQUEST FOR RECONSIDERATION**

MS Post Issue  
Decisions & Certificates of Correction Branch  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Upon reviewing the attached Certificate of Correction for the above-identified patent, Patentee noted a typographical error which should be corrected. On page 3 of the Patent, OTHER PUBLICATIONS, the following correction, listed on the original Request for Correction (copy attached), was not included on the Certificate of Correction:

Column 1, Ref. #12 "Shimizu et al., "The Photo-Erasable Memory Switching Effect of Ag Photo-Doped d Chalcogenide Glasses," 46 BUL. CHEM. SOC. Japan, No. 12, pp. 3662-3665, December 1973." should read --Shimizu et al., "The Photo-Erasable Memory Switching Effect of Ag Photo-Doped Chalcogenide Glasses," 46 BUL. CHEM. SOC. Japan, No. 12, pp. 3662-3665, December 1973.--

Also, page 2 of the Certificate of Correction, Ref. #7 contains a spelling error.

Tregouet, Y.; Bernede, J.C., "Silver movements in Ag<sub>2</sub>Te thin films: switching and memory effects, Thin Solid Films 57 (1979) 49-54." should read --Tregouet, Y.; Bernede, J.C., Silver movements in Ag<sub>2</sub>Te thin films: switching and memory effects, Thin Solid Films 57 (1979) 49-54.--

### REQUEST FOR RECONSIDERATION

In response to the denial to correct reference #2, dated April 4, 2005, reconsideration of the request to correct reference #2 under OTHER PUBLICATIONS on the cover page is solicited. The U.S. Patent Application Ser. No. 6,418,049 is a U.S. Patent No. and is already listed under U.S. PATENT DOCUMENTS on page 2 of the above-identified patent as belonging to Kozicki et al.

Additionally, U.S. Patent Application Ser. No. 10/232,757 was correctly listed on the IDS citation (copy attached) as filed by the applicants.

Accordingly, the following change is requested:

U.S. patent application Ser. No. 6,418,049, Li et al., filed Jul. 23, 2002." should read --U.S. patent application Ser. No. 10/232,757, Li et al.--

Patent No.: 6,812,087

Docket No.: M4065.0700/P700-A

Transmitted herewith is a proposed Certificate of Correction effecting such amendments. Patentees respectfully solicit the granting of the requested corrected Certificate of Correction and believe no fee is involved.

Dated: May 6, 2005

Respectfully submitted,

By



Thomas J. D'Amico

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Attorneys for Applicants

**UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION**

Page 1 of 1

PATENT NO. : 6,812,087  
APPLICATION NO. : 10/634,897  
ISSUE DATE : November 2, 2004  
INVENTOR(S) : Terry L. Gilton et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

**OTHER PUBLICATIONS**

U.S. patent application Ser. No. 6,418,049, Li et al., filed Jul. 23, 2002." should read --U.S. patent application Ser. No. 10/232,757, Li et al.--

**On page 3 OTHER PUBLICATIONS:**

Shimizu et al., "The Photo-Erasable Memory Switching Effect of Ag Photo-Doped d Chalcogenide Glasses," 46 BUL. CHEM. SOC. Japan, No. 12, pp. 3662-3665, December 1973." Should read --Shimizu et al., "The Photo-Erasable Memory Switching Effect of Ag Photo-Doped Chalcogenide Glasses," 46 BUL. CHEM. SOC. Japan, No. 12, pp. 3662-3665, December 1973.--

**On page 7 OTHER PUBLICATIONS**

Tregouet, Y.; Bernede, J.C., "Silver movements in Ag<sub>2</sub>Te thin films: switching and memory effects, Thin Solid Films 57 (1979) 49-54." should read --Tregouet, Y.; Bernede, J.C., Silver movements in Ag<sub>2</sub>Te thin films: switching and memory effects, Thin Solid Films 57 (1979) 49-54.--

MAILING ADDRESS OF SENDER (Please do not use customer number below):  
Thomas J. D'Amico  
DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP  
2101 L Street NW  
Washington, DC 20037-1526

COPY

## On Page 3 OTHER PUBLICATIONS:

Column 1, Ref. #8 "Miyatani, Electrical properties of  $\text{Ag}_2\text{Se}$ , —J. Phys. Soc. Japan, p. 317, 1958." should read --Miyatani, Electrical Properties of  $\text{Ag}_2\text{Se}$ , 13 J. Phys. Soc. Japan, p. 317, 1958.--

Column 1, Ref. #11 "Safran et al., "TEM study of  $\text{Ag}_2\text{Se}$  developed by the reaction of polycrystalline silver films and s l n i u m," 317 Thin Solid Films, pp. 72-76, 1998." should read --Safran et al., "TEM study of  $\text{Ag}_2\text{Se}$  developed by the reaction of polycrystalline silver films and selenium," 317 Thin Solid Films, pp. 72-76, 1998.--

Column 1, Ref. #12 "Shimizu et al., "The Photo-Erasable Memory Switching Effect of Ag Photo-Doped d Chalcogenide Glasses," 46 BUL. CHEM. SOC. Japan, No. 12, pp. 3662-3665, December 1973." should read --Shimizu et al., "The Photo-Erasable Memory Switching Effect of Ag Photo-Doped Chalcogenide Glasses," 46 BUL. CHEM. SOC. Japan, No. 12, pp. 3662-3665, December 1973.--

## On Page 4

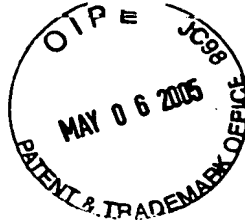
Column 1, Ref. #4 "Asokan, S.; Prasad, M.V.N.; Parthasarathy, G.; Gopal, E.S.R., Mechanical and ch mical thr sholds in IV-VI chalcogenide glasses, Phys. R v. L 62 (1989) 808-810." should read --Asokan, S.; Prasad, M.V.N.; Parthasarathy, G.; Gopal, E.S.R., Mechanical and chemical thresholds in IV-VI chalcogenide glasses, Phys. Rev. Lett, 62 (1989) 808-810.--

Column 2, Ref. #7 "Br ss r, W.J.; Boolchand, P.; Suranyi, P.; Hernandez, J.G., Molecular phase separation and cluster siz in G S 2 glass, Hyperfine Interactions 27 (1986) 389-392." should read --Bresser, W.J.; Boolchand, P.; Suranyi, P.; Hernandez, J.G., Molecular phase separation and cluster size in  $\text{GeSe}_2$  glass, Hyperfine Interactions 27 (1986) 389-392.--

Column 2, Ref. #8 "Cahen, D.; Gilet, J.-M.; Schmitz, C.; Ch rnyak, L.; Gartsman, K.; Jakubowicz, A., Room-Temperature, electric field induced creation of stable devices in  $\text{CuInSe}_2$  Crystals, Science 258 (1992) 271-274." should read --Cahen, D.; Gilet, J. M.; Schmitz, C.; Ch rnyak, L.; Gartsman, K.; Jakubowicz, A., Room-Temperature, electric field induced creation of stable devices in  $\text{CuInSe}_2$  Crystals, Science 258 (1992) 271-274.--

## On Page 5

Column 1, Ref. #2 "El Bouchairi, B.; Bernede, J.C.; Burgaud, P., Properties of  $\text{Ag}_2\text{-xSe}_1\text{ +x/n-Si}$  diodes, Thin Solid Films 110 (1983) 107-113." should read --El Bouchairi, B.; Bernede, J.C.; Burgaud, P., Properties of  $\text{Ag}_2\text{-xSe}_1\text{ +x/n-Si}$  diodes, Thin Solid Films 110 (1983) 107-113.--



PTO/SB/08a/b (08-03)

Approved for use through 07/31/2006. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	10/634,897
				Filing Date	August 6, 2003
				First Named Inventor	Terry L. Gilton
				Art Unit	N/A
				Examiner Name	Not Yet Assigned
Sheet	1	of	11	Attorney Docket Number	M4065.0700/P700-A

COPY

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
	AA	US-6,117,720	09/12/2000	Harshfield	
	AB	US-3,450,967	06/17/1969	Tolutis	
	AC	US-4,350,541	09/21/1982	Mizushima et al.	
	AD	US-1,131,740	02/03/1969	Tolutis	
*	AE	US-3,622,319	11/23/1971	Sharp	
*	AF	US-3,743,847	07/03/1973	Boland	
*	AG	US-4,269,935	05/26/1981	Masters et al.	
*	AH	US-4,312,938	01/26/1982	Drexler et al.	
*	AI	US-4,320,191	03/16/1982	Yoshikawa et al.	
*	AJ	US-4,795,657	01/03/1989	Formigoni et al.	
*	AK	US-4,847,674	07/11/1989	Silwa et al.	
*	AL	US-5,177,567	01/05/1993	Kiersy et al.	
*	AM	US-5,219,788	06/15/1993	Abernathay et al.	
*	AN	US-5,726,083	03/10/1998	Takaishi	
*	AO	US-5,751,012	05/12/1998	Wolstenholme et al.	
*	AP	US-5,789,277	08/04/1998	Zahorik et al.	
*	AQ	US-5,841,150	11/24/1998	Gonzalez et al.	
*	AR	US-5,920,788	07/06/1999	Reinberg	
*	AS	US-5,998,066	12/07/1999	Block et al.	
*	AT	US-6,077,729	06/20/2000	Harshfield	
*	AU	US-6,236,059 B1	05/22/2001	Wolstenholme et al.	
*	AV	US-6,297,170 B1	10/02/2001	Gabriel et al.	
*	AW	US-6,300,684 B1	10/09/2001	Gonzalez et al.	
*	AX	US-6,316,784 B1	11/13/2001	Zahorik et al.	
*	AY	US-6,329,606 B1	12/11/2001	Freyman et al.	
*	AZ	US-6,348,365	02/19/2002	Moore et al.	
*	a	US-6,376,284 B1	04/23/2002	Gonzalez et al.	
*	b	US-6,391,688 B1	05/21/2002	Gonzalez et al.	
*	c	US-6,414,376 B1	07/02/2002	Thakur et al.	
*	d	US-6,418,049 B1	07/09/2002	Kozicki et al.	
*	e	US-6,423,628 B1	07/23/2002	Li et al.	
*	f	US-10/077,867		Campbell et al. (as filed)	
*	g	US-10/232,757		Li et al. (as filed)	
*	h	US-6,473,332	10/2002	Ignatiev et al.	
*	i	US-6,469,364	10/2002	Kozicki	
*	j	US-2002/0168820 App.	11/2002	Kozicki	
*	K	US-4,316,946	1/1982	Masters, et al.	
*	l	US-4,419,421	12/1983	Wichelhaus, et al.	
*	m	US-6,487,106	11/26/2002	Kozicki	
*	n	US-5,314,772	5/24/1994	Kozicki	
*	o	US-2002/0190350 APP	12/19/2002	Kozicki	

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 6,812,087 B2  
DATED : November 2, 2004  
INVENTOR(S) : Terry L. Gilton et al.

Page 1 of 3

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

COPY

Title page,

Item [75], Inventors, "**Giltom**" should read -- **Gilton** --

Item [56], **References Cited**, U.S. PATENT DOCUMENTS, insert

-- 6,423,628 B1 7/2002 Li et al.

6,473,332

10/2002

Ignatiev et al. --

"Miyatani, Electrical properties of  $\text{Ag}_2\text{Se}$ , --J. Phys. Soc. Japan, p. 317, 1958." should read --Miyatani, Electrical Properties of  $\text{Ag}_2\text{Se}$ , 13 J. Phys. Soc. Japan, p. 317, 1958. --

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"Asokan, S.; Prasad, M.V.N.; Parthasarathy, G.; Gopal, E.S.R., Mechanical and ch mical thr sholds in IV-VI chalcogenide glasses, Phys. R v. L 62 (1989) 808410." should read -- Asokan, S.; Prasad, M.V.N.; Parthasarathy, G.; Gopal, E.S.R., Mechanical and chemical thresholds in IV-VI chalcogenide glasses, Phys. Rev. Lett, 62 (1989) 808-410.--

"Br ss r, W.J.; Boolchand, P.; Suranyl, P.; Hernandez, J.G., Molecular phase separation and cluster siz In G S 2 glass, Hyperfine Interactions 27 (1986) 389-392." should read -- Bresser, W.J.; Boolchand, P.; Suranyi, P.; Hernandez, J.G., Molecular phase separation and cluster size in  $\text{GeSe}_2$  glass, Hyperfine Interactions 27 (1986) 389-392.--

"Cahen, D.; Gilet, J.-M.; Schmitz, C.; Ch rnyak, L.; Gartsman, K.; Jakubowicz, A., Room-Temperature, electric field induced creation of stable devices in  $\text{CuInSe}_2$  Crystals, Science 258 (1992) 271-274." should read -- Cahen, D.; Gilet, J. M.; Schmitz, C.; Chernyak, L.; Gartsman, K.; Jakubowicz, A., Room-Temperature, electric field induced creation of stable devices in  $\text{CuInSe}_2$  Crystals, Science 258 (1992) 271-274.--

"El Bouchairi, B.; Bernede, J.C.; Burgaud, P., Propeties of  $\text{Ag}_{2-x}\text{Se}_x$  +x/n-Si diodes, Thin Solid Films 110 (1983) 107-113." should read -- El Bouchairi, B.; Bernede, J.C.; Burgaud, P., Properties of  $\text{Ag}_{2-x}\text{Se}_x$  +x/n-Si diodes, Thin Solid Films 110 (1983) 107-113. --

"Fadel, M., Switching ph nom non in evaporated S -Ge-As thin films of amorphous chalcogenid glass, Vacuum 44 (1993) 851455." should read -- Fadel, M., Switching phenomenon in evaporated Se-Ge-As thin films of amorphous chalcogenide glass, Vacuum 44 (1993) 851-855.--

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 6,812,087 B2  
DATED : November 2, 2004  
INVENTOR(S) : Terry L. Gilton et al.

Page 2 of 3

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title page (cont'd).

"Fadel, M.; El-Shari, H.T., Electrical, thermal and optical properties of  $\text{Se}_{75}\text{Ge}_{75}\text{Sb}_{18}$ , Vacuum 43 (1992) 253-275." should read --Fadel, M.; El-Shari, H.T., Electrical, thermal and optical properties of  $\text{Se}_{75}\text{Ge}_{75}\text{Sb}_{18}$ , Vacuum 43 (1992) 253-257. --

"Hegab, N.A.; Fadel, M.; Sedeek, K., Memory switching phenomena in thin films of chalcogenide semiconductors, Vacuum 45 (1994) 459-462." should read -- Hegab, N.A.; Fadel, M.; Sedeek, K., Memory switching phenomena in thin films of chalcogenide semiconductors, Vacuum 45 (1994) 459-462. --

"Hosokawa, S., Atomic and electronic structures of glassy GexSel-x around the stiffness threshold composition, J. Optoelectronics and Advanced Materials 3 (2001) 199-214." should read -- Hosokawa, S., Atomic and electronic structures of glassy GexSel-x around the stiffness threshold composition, J. Optoelectronics and Advanced Materials 3 (2001) 199-214. --

"Matsushita, T.; Yamagami, T.; Okuda, M., Polarized memory effect observed on Se-SnO<sub>2</sub> system, Jap. J. Appl. Phys. 11 (1972) 1657-1662." should read --Matsushita, T.; Yamagami, T.; Okuda, M., Polarized memory effect observed on Se-SnO<sub>2</sub> system, Jap. J. Appl. Phys. 11 (1972) 1657-1662.--

"Prakash, S.; Asokan, S.; Ghare, D.B., Easily reversible memory switching in Ge-As-Te glasses, J. Phys. D: Appl. Phys. 29 (1996) 2004-2008." should read -- Prakash, S.; Asokan, S.; Ghare, D.B., Easily reversible memory switching in Ge-As-Te glasses, J. Phys. D: Appl. Phys. 29 (1996) 2004-2008. --

"Rahman, S.; Silvarama Sastry, G., Electronic switching in Ge-Bi-Se-Te glasses, Mat. Sci. and Eng. B12 (1992) 219-222." should read -- Rahman, S.; Silvarama Sastry, G., Electronic switching in Ge-Bi-Se-Te glasses, Mat. Sci. and Eng. B12 (1992) 219-222.--

"Tregouet, Y.; Bernede, J.C., Silver movements in Ag<sub>2</sub>Te thin films: switching and memory effects, Thin Solid Films 57 (1979) 49-54." should read -- Tregouet, Y.; Bernede, J.C., Silver movements in Ag<sub>2</sub>Te thin films: switching and memory effects, Thin Solid Films 57 (1979) 49-54. --

"Uemura, O.; Kameda, Y.; Kokai, S.; Satow, T., Thermally induced crystallization of amorphous Ge<sub>0.4</sub>S<sub>0.6</sub>, J. Non-Cryst. Solids 117-118 (1990) 219-221." should read -- Uemura, O.; Kameda, Y.; Kokai, S.; Satow, T., Thermally induced crystallization of amorphous Ge<sub>0.4</sub>Se<sub>0.6</sub>, J. Non-Cryst Solids 117-118 (1990) 219-221. --



UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 6,812,087 B2  
DATED : November 2, 2004  
INVENTOR(S) : Terry L. Gilton et al.

Page 3 of 3

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 1,

Line 50, "-of" should read -- of --

Column 8,

Line 59, "comprising least" should read -- comprising at least --



Signed and Sealed this

Nineteenth Day of April, 2005

A handwritten signature in dark ink, reading "Jon W. Dudas", is written over a light, textured background.

JON W. DUDAS

*Director of the United States Patent and Trademark Office*